

REMARKS

Applicants acknowledge the indication of the allowability of the subject matter of Claims 5 and 6, as set forth at paragraph 4 of the Office Action. The latter claims have been objected to on the grounds that they depend from a rejected independent claim, and would be allowable if rewritten in independent form. Nevertheless, for the reasons set forth hereinafter, Applicants respectfully submit that Claims 5 and 6 are allowable in their present dependent form.

The present invention is directed to a reactor system for reacting a hydrocarbon or hydrocarbon containing derivative charging material, having a catalyst-coated reaction chamber, to which a reaction educt stream can be fed through a reaction chamber inlet. In order to facilitate a rapid heating of the reaction chamber to operating temperature during a startup phase, a plurality of inlet openings, each of which has its own heating element 22-24 (Figure 2), are provided upstream of the reaction chamber, relative to the direction of educt flow. Each of the heating elements 22-24 is permeable to the educt flow, and is coated with a catalyst material. In this manner, the flow of the liquid or gaseous comix steam into the reaction chamber can be provided in the form of a plurality of discrete individual streams of preheated material, thereby accommodating a rapid increase of the temperature within the reaction chamber itself. This

embodiment of the invention is depicted in Figure 2, and is discussed in the text of the specification at page 9, lines 5-19.

The Abe reference, on the other hand, discloses a reformer which includes a porous heater unit 10 containing at least one catalyst component, as indicated in the specification at Column 6, lines 40-52. Ordinarily the heater unit 10 is disposed upstream of the catalyst unit 11 in the flow direction of the reactant fluid. (See Column 6, lines 30-31.)

To this extent, the reformer arrangement disclosed in Abe is similar to that of the present invention. However, Abe contains no disclosure which teaches or suggests the point-by-point injection of reaction educt feed into the reaction chamber in the manner recited in independent Claims 1 (as amended) and 4 of the present application. That is, Claim 4, in particular, recites that the electrical heater includes "means for point-by-point injection of at least one reaction educt...into the reaction chamber at at least one place within the reaction chamber inlet cross-section". Similarly, Claim 1 recites that heating elements are disposed at a plurality of inlet openings upstream of the reaction chamber, and that the heating elements "accommodat[e] a discrete point-by-point injection of heated reaction educt material into the reaction chamber". By contrast, in all of the embodiments disclosed in Abe, a single heater unit 10 is disposed across substantially the entire cross-section of the inlet opening. In particular, none of the embodiments disclosed in Abe includes a plurality of

individual heating elements, such as recited in Claims 1 and 4, which achieve an effective rapid heating of the reaction chamber. Accordingly, Applicants respectfully submit that independent Claims 1 and 4, and therefore dependent Claims 2 and 3 as well, distinguish over the cited Abe reference.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038738.49232).

Respectfully submitted,



Gary R. Edwards
Registration No. 31,824

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
GRE:kms
352727v1